

THAT WHICH IS CLAIMED:

1. An isolated nucleic acid molecule selected from the group consisting of:
  - a) a nucleic acid molecule comprising a nucleotide sequence which is at least 60% identical to the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_\_ or \_\_\_\_\_, wherein said sequence encodes a polypeptide having biological activity;
  - b) a nucleic acid molecule comprising a fragment of at least 300 nucleotides of the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_\_ or \_\_\_\_\_;
  - c) a nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_ or \_\_\_\_\_;
  - d) a nucleic acid molecule which encodes a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_, wherein the fragment comprises at least 15 contiguous amino acids of SEQ ID NO:2, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_;
  - e) a nucleic acid molecule which encodes a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:5, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_, wherein the fragment comprises at least 15 contiguous amino acids of SEQ ID NO:5, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_;
  - f) a nucleic acid molecule which encodes a naturally occurring allelic variant of a biologically active polypeptide comprising the amino acid sequence of SEQ ID NO:2, or the amino acid sequence encoded by the cDNA insert of the plasmid

deposited with the ATCC as Accession Number \_\_\_\_\_, wherein the nucleic acid molecule hybridizes to a nucleic acid molecule comprising the complement of SEQ ID NO:1, SEQ ID NO:3, or a complement thereof, under stringent conditions;

- g) a nucleic acid molecule which encodes a naturally occurring allelic variant of a polypeptide comprising the amino acid sequence of SEQ ID NO:5, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_, wherein the nucleic acid molecule hybridizes to a nucleic acid molecule comprising the complement of SEQ ID NO:4, SEQ ID NO:6, or a complement thereof, under stringent conditions;
- h) a nucleic acid molecule comprising the complement of a), b), c), d), e), f), or g).

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2. The isolated nucleic acid molecule of claim 1, which is selected from the group consisting of:

- a) a nucleic acid comprising the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_\_, \_\_\_\_\_ or a complement thereof; and
- b) a nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:5, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_ or \_\_\_\_\_, or a complement thereof.

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3. The nucleic acid molecule of claim 1 further comprising vector nucleic acid sequences.

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4. The nucleic acid molecule of claim 1 further comprising nucleic acid sequences encoding a heterologous polypeptide.

5. A host cell which contains the nucleic acid molecule of claim 1.

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6. The host cell of claim 5 which is a mammalian host cell.
7. A non-human mammalian host cell containing the nucleic acid molecule of claim 1.
- 6 8. An isolated polypeptide selected from the group consisting of:
- a) a biologically active polypeptide which is encoded by a nucleic acid molecule comprising a nucleotide sequence which is at least 60% identical to a nucleic acid comprising the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_\_ or \_\_\_\_\_;
- 12 b) a naturally occurring allelic variant of a biologically active polypeptide comprising the amino acid sequence of SEQ ID NO:2, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_, wherein the polypeptide is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule comprising the complement of SEQ ID NO:1 or SEQ ID NO:3 under stringent conditions;
- 18 c) a naturally occurring allelic variant of a polypeptide comprising the amino acid sequence of SEQ ID NO:5, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_, wherein the polypeptide is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule comprising the complement of SEQ ID NO:4 or SEQ ID NO:6 under stringent conditions;
- 24 d) a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_, wherein the fragment comprises at least 15 contiguous amino acids of SEQ ID NO:2; and
- e) a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:5, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_, wherein the fragment comprises at least 15 contiguous amino acids of SEQ ID NO:5.
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9. The isolated polypeptide of claim 8 comprising the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:5.

10. The polypeptide of claim 8 further comprising heterologous amino acid sequences.

11. An antibody which selectively binds to a polypeptide of claim 8.

12. A method for producing a polypeptide selected from the group consisting of:

12 a) a polypeptide comprising the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_ or \_\_\_\_\_;

b) a polypeptide comprising a fragment of the amino acid sequence of SEQ ID NO:2, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_, wherein the fragment comprises at least 15 contiguous amino acids of SEQ ID NO:2, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_;

c) a polypeptide comprising a fragment of the amino acid sequence of SEQ ID NO:5, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_, wherein the fragment comprises at least 15 contiguous amino acids of SEQ ID NO:5, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_;

d) a naturally occurring allelic variant of a biologically active polypeptide comprising the amino acid sequence of SEQ ID NO:2, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_, wherein the polypeptide is encoded by a nucleic acid

molecule which hybridizes to a nucleic acid molecule comprising the complement of SEQ ID NO:1 or SEQ ID NO:3; and

e) a naturally occurring allelic variant of a biologically active polypeptide comprising the amino acid sequence of SEQ ID NO:5, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as

- 6 Accession Number \_\_\_\_\_, wherein the polypeptide is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule comprising the complement of SEQ ID NO:4 or SEQ ID NO:6; comprising culturing the host cell of claim 5 under conditions in which the nucleic acid molecule is expressed.

- 12 13. A method for detecting the presence of a polypeptide of claim 8 in a sample, comprising:

a) contacting the sample with a compound which selectively binds to a polypeptide of claim 8; and  
b) determining whether the compound binds to the polypeptide in the sample.

- 18 14. The method of claim 13, wherein the compound which binds to the polypeptide is an antibody.

15. A kit comprising a compound which selectively binds to a polypeptide of claim 8 and instructions for use.

- 24 16. A method for detecting the presence of a nucleic acid molecule of claim 1 in a sample, comprising the steps of:

a) contacting the sample with a nucleic acid probe or primer which selectively hybridizes to the nucleic acid molecule; and

- 30 b) determining whether the nucleic acid probe or primer binds to a nucleic acid molecule in the sample.

17. The method of claim 16, wherein the sample comprises mRNA molecules and is contacted with a nucleic acid probe.

18. A kit comprising a compound which selectively hybridizes to a nucleic acid molecule of claim 1 and instructions for use.

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19. A method for identifying a compound which binds to a polypeptide of claim 8 comprising the steps of:

- a) contacting a polypeptide, or a cell expressing a polypeptide of claim 8 with a test compound; and
- b) determining whether the polypeptide binds to the test compound.

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20. The method of claim 19, wherein the binding of the test compound to the polypeptide is detected by a method selected from the group consisting of:

- a) detection of binding by direct detecting of test compound/polypeptide binding;
- b) detection of binding using a competition binding assay;
- c) detection of binding using an assay for NARC8-mediated modulation of programmed cell death.

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21. A method for modulating the activity of a polypeptide of claim 8 comprising contacting a polypeptide or a cell expressing a polypeptide of claim 8 with a compound which binds to the polypeptide in a sufficient concentration to modulate the activity of the polypeptide.

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22. A method for identifying a compound which modulates the activity of a polypeptide of claim 8, comprising:

- a) contacting a polypeptide of claim 8 with a test compound; and
- b) determining the effect of the test compound on the activity of the polypeptide to thereby identify a compound which modulates the activity of the polypeptide.

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